(4) At a maximum estimate it is safe to say that not one patient in a thousand has been injured in the past five years by an X-ray examination, and in the past year not one in ten thousand. (5) More than two-thirds of these injuries occurred in the first two years of the use of the X-ray. Only one mild case is reported as occurring in the current year, those cases in which the exposure has been made for therapeutic purposes being excluded. (6) The cause of X-ray injuries is not definitely known. It is some form of energy closely allied to the photographically active X-ray, and radiates with it from the platinum terminal. (7) The primary injury is to the nerves controlling the nutrition of the skin. (8) There is no good evidence of injury to the deeper tissues without primary interference with skin. (9) The important factors which contribute to the production of X-ray burns are: The intensity of the current used to stimulate the tube; the quality of the tube, the distance and time of exposure; the idiosyncrasy of the patient. (10) The static machine is somewhat less likely to produce injury than other forms of apparatus. (11) From the data of the reported cases we can say that no burn has been produced by an exposure equal to or less than the equivalent of five minutes at ten inches. (12) It is impossible from the data to say how intense an exposure must be to produce a burn, for a comparison of the cases shows that an inconstant factor or factors exist. (13) Those inconstant factors are more likely to lie in the complex human organism than in the less complicated construction of the tube. (14) General experience has shown that soft tubes produce a more intense effect on the tissues than hard. (15) While we cannot control these inconstant factors therapeutic exposures will continue to be dangerous, and it is therefore important to record the exact conditions of the patient's local and constitutional idiosyncrasies as well as those of the tube. (16) In cases of injury the time before the appearance of the first symptoms has varied from a few minutes to three weeks. Five cases have remained latent for over three weeks; two of these for five months. (17) It is impossible to predict the severity of the lesion from the time of its appearance after exposure. (18) The writer suggests ten minutes at six inches from the platinum terminal as a standard therapeutic exposure. This will make comparisons between the inconstant factors easier. (19) Unless signs of dermatitis appear within three weeks after the exposure they are unlikely to appear at all. In one-third of the reported cases the appearance occurred within the first four days, in one-half the cases before the ninth day. (20) In the ordinary X-ray examination with fluoroscope or skiagraph the operator takes the entire responsibility of injury; in exposures for therapeutic purposes the patient shares the responsibility.

Spinal Anæsthesia.—KALLIONZIS (*Revue de Chir.*, 1901, No. 10) states that spinal anæsthesia at the present time is in the period analogous to the epoch of the discovery and subsequent experimentation with chloroform and ether as general anæsthetics. Tuffier has stated that he does not know of a single case which has been subjected to spinal anæsthesia and been followed by a lesion of the nervous system. Spinal anæsthesia has no operative mortality. The five reported cases of death were all postoperative. In two cases the cause was not given, while in the other three the cause was in no way related to the method of anæsthesia. The author reports eleven cases, all successful, of operations under spinal anæsthesia. The anæsthesia was complete in every case. All had a slowing of the pulse and elevation of the temperature on the day of operation, seven had headache, four had pallor of the face, with copious perspiration, and three had vomiting. A comparison of the two methods of anæsthesia, chloroformization and spinal cocainization, shows that the latter has many elements in its favor, and its use should be carefully considered by all surgeons who have hitherto hesitated to employ it.

Chloroform and Ether Anæsthesia.—PONCET (*Gaz. hebdomadaire de Méd. et de Chir.*, March 6, 1902), after an admirable review of this all-important subject, states in conclusion: (1) Chloroform is more dangerous than ether, as all statistics show. The researches of Julliard show one death in every two or three thousand chloroformizations, and only one death in every thirteen or fourteen thousand etherizations. The author reports 29,000 personal etherizations with only one death, and that a child who had organic heart disease. (2) Ether does not cause the primary or reflex laryngeal syncope at the onset of the anæsthesia which is so suddenly fatal and relatively frequent when chloroform is used. Ether alone is to be preferred to mixtures for purposes of anæsthesia. (3) It has not been proved, and no statistics have established, that the postoperative pulmonary complications, such as bronchitis, congestion of the lungs, bronchopneumonia, œdema of the lungs, etc., are due to the irritant action of the vapors of ether. The so-called etherization pneumonia or chloroformization pneumonia are essentially infection pneumonias. The pulmonary complications are probably just as frequent in those operative cases which receive no anæsthetic. (4) It is not exact to say that the mortality after the narcosis by ether, in the days following the operation, becomes the same as that caused by chloroform, which kills during the anæsthesia upon the operating-table. This opinion becomes much less justified when one considers that the vapors of chloroform are more irritant than those of ether. (5) The contraindications to anæsthesia are the same as they formerly were. Cardiac or pulmonary lesions do not absolutely contraindicate etherization for a long or painful operation, but instead the anæsthesia in these special cases must be administered with extreme care.

Two Cases of Inoperable Scirrhus of the Breast Treated by Oophorectomy: Results.—PATON (*British Medical Journal*, March 1, 1902) reports the following cases:

CASE I.—Married, aged forty-three years, with an extensive infiltration of all of the left breast and some of the axillary glands with cancer. The breast and glands were removed, but six months later she again came for treatment with an inoperable recurrence and involvement of the opposite breast. Oöphorectomy was immediately performed, and a day or two later the patient was given 5 gr. of thyroid extract three times daily, which was continued for a period of three weeks. Subsequently the patient's mental condition became a source of trouble; she was very restless and unable to sleep, trying to get out of bed, and apparently rapidly going down hill. Later it was noted that the growth on the left side seemed a little smaller